

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Currently Amended) Medical or dental handpiece comprising a treatment tool driven by a drive part via a transmission arrangement, the transmission arrangement ~~containing~~ comprising: at least two

first and second planetary transmission stages connected one after another, each of the first and second transmission stages having, which has ~~[[ - ]]~~ a sun gear mounted on a drive shaft, and ~~[[ - ]]~~ a planetary gear carrier having a plurality of uniformly distributed planetary gears cooperating with the sun gear, the planetary gear carrier of the first transmission stage serving as a drive shaft and carrier of the sun gear of the second transmission stage~~[[ , ]]~~; and

~~[[ - ]]~~ a hollow gear, fixed to a housing, surrounding the plurality of planetary gears of both the first and second transmission stages, and the hollow gear having an inner toothing,

~~the planetary gear carrier of at least one transmission stage serving as drive shaft and carrier of the sun gear of a following transmission stage,~~

wherein

the drive shaft for ~~each~~ the first transmission stage extends beyond the sun gear driven by the drive shaft of the first transmission stage ~~thereby~~ and the planetary gear carrier associated with ~~this~~ the sun gear driven by the drive shaft of the first transmission stage is arranged rotatably on a portion of ~~said~~ the drive shaft for the first transmission stage that extends beyond the sun gear driven by the drive shaft for the first transmission stage.

2. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein

the planetary gear carriers of ~~[[all]]~~ the first and second transmission stages are hollow shafts and the ~~extension portion~~ of the drive shaft for the first transmission stage that extends beyond the sun gear extends substantially over the entire length of the transmission arrangement, centrally through openings formed in the planetary gear carriers.

3. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein

the planetary gear carriers are slidingly mounted with respect to the drive shafts ~~engaging therein~~.

4. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein

the sun gears and the planetary gears of the ~~individual~~ first and second transmission stages have ~~in each case~~ identical dimensions.

5. (Currently Amended) Medical or dental handpiece according to claim 4,

wherein

the hollow ~~gears~~ gear ~~for all transmission stages are~~ is formed ~~by means~~ of a single sleeve-like component having an inner toothing.

6. (Currently Amended) Medical or dental handpiece comprising a treatment tool driven by a drive part via a transmission arrangement,

wherein the transmission arrangement comprises ~~at least two~~ first and second planetary transmission stages connected one after another, each of the first and second planetary transmission stages having ~~which has~~ [[,]] a sun gear mounted on a drive shaft~~[[,]]~~ and [[,]] a planetary gear carrier having three uniformly distributed planetary gears cooperating with the sun gear~~[[,]]~~; and

[[,]] a hollow gear~~[[,]]~~ fixed to a housing, the hollow gear surrounding the three planetary gears of the first and second planetary transmission stages, and the hollow gear having an inner toothing,

the planetary gear carrier of ~~at least one~~ the first transmission stage serving as drive shaft and carrier of the sun gear of the ~~following~~ second transmission stage, the drive shaft of the first transmission stage extending beyond the sun gear of the second transmission stage,

wherein

the hollow ~~gears~~ gear ~~for all transmission stages are~~ is formed by a single sleeve-like component having an inner toothing, ~~and the drive shaft extends beyond the sun gear.~~

7. (Currently Amended) Medical or dental handpiece according to claim 6,

wherein

the sun gears and the planetary gears of the ~~individual~~ first and second transmission stages have ~~in each case~~ identical dimensions.

8. (Currently Amended) Medical or dental handpiece according to claim 6

wherein

the planetary gear carrier associated with ~~this~~ the sun gear driven by the drive shaft of the first planetary transmission stage is arranged rotatably on a portion of the drive shaft of the first planetary transmission stage that extends beyond the sun gear driven by the drive shaft of the first planetary transmission stage.

9. (Currently Amended) Medical or dental handpiece according to claim 8

wherein

the planetary gear carriers of ~~[[all]]~~ the first and second transmission stages are formed as hollow shafts and the ~~extension of the~~ drive shaft for the first transmission stage extends substantially over the entire length of the transmission arrangement, centrally through openings of formed in the planetary gear carriers.

10. (Currently Amended) Medical or dental handpiece according to claim 8

wherein

the planetary gear carriers are slidingly mounted with respect to the drive shafts ~~engaging therein~~.

11. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein at least one of the handpiece and the transmission arrangement has a respective housing and

the drive shaft for the first transmission stage is mounted ~~with respect to the handpiece housing or a transmission housing~~ by a ball bearing.

12. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein at least one of the handpiece and the transmission arrangement has ~~or have~~ a respective housing and

the planetary gear carrier of the ~~last~~ second transmission stage is mounted ~~with respect to the handpiece housing or a transmission housing by means of at least one a~~ ball bearing.

13. (Currently Amended) Medical or dental handpiece according to claim 1,  
wherein  
the planetary gear carriers of the first and second transmission stages ~~[[in]]~~  
each ~~case~~ carry three planetary gears.

14. (Currently Amended) Medical or dental handpiece according to claim 1,  
wherein  
components of the first and second transmission stages at least partially  
comprise ceramic material.

15. (Currently Amended) Medical or dental handpiece according to claim 14,  
wherein  
the drive shafts or planetary gear carriers of the first and second transmission  
stages comprise a ceramic material.

16. (Previously Presented) Medical or dental handpiece according to claim 14,  
wherein  
the sun gear and the planetary gears comprise a ceramic material.

17. (Previously Presented) Medical or dental handpiece according to claim 14,

wherein

the ceramic material is silicon nitride.

18. (Canceled).

19. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein

the first and second transmission stages each have ~~in each case~~ a transmission ratio of 3:1.

20. (Currently Amended) Medical or dental handpiece according to claim 1,

wherein

the ~~at least two planetary~~ first and second transmission stages are arranged in a sleeve-like transmission housing.

21. (Previously Presented) Medical or dental handpiece according to claim 20,

wherein

the transmission arrangement can be emplaced in the handpiece, or removed therefrom, as a structural unit.

22. (Currently Amended) Medical or dental handpiece comprising a treatment tool driven by a drive part via a transmission arrangement,

wherein the transmission arrangement contains at least one ~~planetary~~ transmission, the transmission comprising:~~which has~~

[[ - ]] a sun gear mounted on a drive shaft, the drive shaft extending beyond the sun gear,

[[ - ]] a planetary gear carrier having a plurality of uniformly distributed planetary gears cooperating with the sun gear, and

[[ - ]] a hollow gear, fixed to a housing, surrounding the planetary gears, and having an inner toothing,

and wherein

components of the planetary transmission comprise ceramic material.

23. (Previously Presented) Medical or dental handpiece according to claim 22,

wherein

the drive shaft or planetary gear carrier of the planetary transmission comprises a ceramic material.



24. (Previously Presented) Medical or dental handpiece according to claim 22,

wherein

the sun gear and the planetary gears comprise a ceramic material.

25. (Previously Presented) Medical or dental handpiece according to claim 22,

wherein

the ceramic material is silicon nitride.

26. (Currently Amended) Transmission arrangement for a medical or dental handpiece, for the production of a drive connection between a drive part and a treatment tool,

~~wherein~~ the transmission arrangement ~~comprises~~ comprising first and second at least two planetary transmission stages connected one after another, each of the first and second planetary transmission stages having ~~which has~~ [[ - ]] a sun gear mounted on a drive shaft, and [[ - ]] a planetary gear carrier having three uniformly distributed planetary gears cooperating with the sun gear [[,]]; and

[[ - ]] a hollow gear [[,]] fixed to a housing, the hollow gear surrounding the planetary gears of the first and second planetary transmission, and the hollow gear having an inner toothing,

~~and~~ wherein the planetary gear carrier of ~~at least one~~ first transmission stage serves as drive shaft and carrier of the sun gear of the ~~following~~ second transmission stage, and

~~wherein~~

the drive ~~shaft~~ shafts for ~~each~~ the first and second transmission stage is stages are extended beyond the respective sun gear gears driven thereby and [[in]] the planetary gear carrier belonging to this cooperating with the respective sun gear is arranged rotatably on the respective drive shaft extension.

27. (Currently Amended) Medical or dental handpiece according to claim 26,

wherein

the planetary gear carriers of ~~[[all]]~~ the first and second transmission stages are hollow shafts and ~~the extension of~~ the drive shaft for the first transmission stage extends substantially over the entire length of the transmission arrangement, centrally through openings formed in the planetary gear carriers.

28. (Currently Amended) Transmission arrangement for a medical or dental handpiece, for the production of a drive connection between a drive part and a treatment tool,

~~wherein~~ the transmission arrangement ~~comprises at least two~~ comprising first and second planetary transmission stages connected one after another, each of the first and second planetary transmission stages having ~~which has~~ ~~[[ - ]]~~ a sun gear mounted on a drive shaft, and ~~[[ - ]]~~ a planetary gear carrier having three uniformly distributed planetary gears cooperating with the sun gear~~[[ , ]]~~; and

~~[[ - ]]~~ a hollow gear~~[[ , ]]~~ fixed to a housing, the hollow gear surrounding the planetary gears, and having an inner toothing,

wherein the planetary gear carrier of ~~at least one~~ the first transmission stage serves as drive shaft and carrier of the sun gear of the ~~following~~ the second transmission stage, and the drive shaft extends beyond the sun gear.

the hollow gears for ~~all~~ the first and second transmission stages are formed by a single sleeve-like component having an inner toothing, ~~and the drive shaft extends beyond the sun gear.~~

29. (Currently Amended) Transmission arrangement for a medical or dental handpiece, for the production of a drive connection between a drive part and a treatment tool,

~~wherein~~ the transmission arrangement ~~comprises at least one~~ comprising a planetary transmission having, ~~which has~~

[[ - ]] a sun gear mounted on a drive shaft, the drive shaft extending beyond the sun gear,

[[ - ]] a planetary gear carrier having a plurality of uniformly distributed planetary gears cooperating with the sun gear, and

[[ - ]] a hollow gear, fixed to a housing, surrounding the planetary gears, having an inner toothing,

wherein

components of the planetary transmission comprise a ceramic material.

30. (Previously Presented) Transmission arrangement according to claim 29,

wherein

the ceramic material is silicon nitride.